

REMARKS

Entry of Amendment and IDS

As Applicants are filing a RCE herewith, this amendment and the IDS filed on January 5, 2011 should be entered and considered by the Examiner at this time.

Allowable Subject Matter

Applicants appreciate the Examiner's allowance of Claims 4-9.

Applicants will now address each of the remaining objections and rejections in the order in which they appear in the Final Rejection.

Claim Objections

In the Final Rejection, the Examiner objects to Claims 17-19 under 37 CFR 1.75(c) as being of improper dependent form for failing to limit the subject matter of a previous claim. This objection is respectfully traversed.

While Applicants traverse this objection, in order to advance the prosecution of this application, Applicants are amending Claims 17-19 to place them in independent form. This amendment should overcome this objection.

Accordingly, it is respectfully requested that this objection be withdrawn.

If any fee should be due for amending these claims to be in independent form, please charge our deposit account 23/0920 for this fee.

Claim Rejections – 35 USC §112

In the Final Rejection, the Examiner now rejects Claim 19 under 35 USC §112, second paragraph, as being indefinite. This rejection is respectfully traversed.

While Applicants traverse this rejection, as explained above, in order to advance the prosecution of this application, Applicants are amending Claim 19 to place it in independent form. This amendment should overcome this rejection.

Accordingly, it is respectfully requested that this rejection be withdrawn.

Double Patenting

The Examiner also has the following double patenting rejections:

- A. Claims 1-3 and 11-16 are rejected on the ground of non statutory obviousness-type double patenting as being unpatentable over Claims 1, 2, 4, 5, 7, 8, 10, 11, 17, 18, 20, 21, 23, 24, 26 and 27 of U.S. 7,564,052.
- B. Claims 1-3, 11-16 are rejected on the ground of non statutory obviousness-type double patenting as being unpatentable over Claims 3, 5, 7, 11 and 12 of U.S. 7,598,670.
- C. Claim 1-3 and 10-16 are provisionally rejected on the ground of non statutory obviousness-type double patenting as being unpatentable over Claims 5, 6, 7, 14, 15, 21 of copending application 10/582,249.
- D. Claim 1-3 and 11-16 are provisionally rejected on the ground of non statutory obviousness-type double patenting as being unpatentable over Claims 1-40 of copending application 10/577,472 (which has now issued as US 7,750,560).

These rejections are respectfully traversed.

In particular, the light emitting element of the present invention includes bipolar substances in each of a first layer and a second layer. Bipolar substances possess the ability to conduct both holes and electrons. This property is discussed, for example, in paragraph [0035] of the publication of the present application (US 2008/0241586) which discusses:

- the ratio of the hole mobility to the electron mobility is 100 or less
- the ratio of the electron mobility to the hole mobility is 100 or less.

This feature is recited in independent Claims 1 and 2 as:

“[...] wherein the first layer contains a first substance of which a ratio of any one of an electron mobility and a hole mobility to the other one is 100 or less [...]”; and

“wherein the second layer contains a third substance of which a ratio of any one of an electron mobility and a hole mobility to the other one is 100 or less [...]”.

In contrast, this feature is not recited in the claims of the ‘052 patent, the ‘670 patent, the ‘249 application or the ‘472 application (now ‘560 patent).

Therefore, there is no double patenting, and it is respectfully requested that these rejections be withdrawn.

Response To Arguments

In the Final Rejection, the Examiner includes a section “Response To Arguments.” Applicants have the following comments in reply.

In this section, the Examiner argues that US 7,598,670, 10/582,249 and 10/577,472 (now US Patent 7,750,560) each discloses an electron transporting material, and are considered to be fully electron transporting and therefore have a ratio of 100 or less of an electron transporting property; and discloses a hole transporting material, and are considered to be fully hole transporting and therefore has a ratio of 100 or less of a hole transporting property.

As explained above, these references do not include the above features.

If the Examiner wishes to maintain these rejections, then Applicants respectfully request that the Examiner clarify the definition the Examiner is using for “a ratio of 100 [...] of a hole (or “electron”) transporting property” and what is the ratio that the Examiner considers reads on

this. Applicants believe there might be some misunderstanding. For example, the ratio electron mobility / hole mobility of a material transporting electrons (mobility superior to 0) and totally insulating to holes (thus mobility equal to 0) would be infinite. The quantities considered here are mobilities, usually expressed in $\text{cm}^2 \text{V}^{-2} \text{s}^{-1}$.

Further, in the Response to Arguments section, the Examiner is silent regarding the features of the claims “any one of an electron mobility and a hole mobility to the other one is 100 or less”. It is respectfully requested that if this rejection is maintained that the Examiner clarify as to where these features are allegedly claimed in the cited references.

Amendment to Claims

Applicants are amending Claim 10 to correct a minor antecedent issue (“x-th layer” amended to “x-th piece of layer”).

New Claims

Applicants are adding new dependent Claims 20-22 which are dependent on Claims 17-19 and correspond to dependent Claims 6 and 9. It is respectfully requested that these new claims be entered and allowed.

If any fee should be due for these new claims, please charge our deposit account 23/0920.

Information Disclosure Statement

Applicants filed an IDS on January 5, 2011. As a RCE is being filed herewith, it is respectfully requested that this IDS be entered and considered at this time.

Conclusion

It is respectfully submitted that the present application is in a condition for allowance and should be allowed.

If any fee should be due for this amendment, the RCE and/or the new claims, please charge our deposit account 23-0920.

Favorable reconsideration is earnestly solicited.

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Respectfully submitted,

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